

Planning Your Surge Capacity: Useful Tools



As of 12 April, the number of confirmed COVID-19 cases around the world is approaching 1.8 million. Almost 110,000 people have died and over 404,000 recovered.

Despite the declines in deaths in Italy and Spain and other European nations, such as the Netherlands, Ireland and Austria approaching their peaks, others are still facing peak mortality later in April, including the United Kingdom, Germany, Norway and Greece. It is therefore important for the health systems in those countries to properly plan their responses and manage surge capacity.

You may also like: [Where Are the Most Effective Anti-COVID-19 Strategies?](#)

The World Health Organization is constantly expanding its [base of resources](#) with the [Policy Brief](#) at its core. The brief is an overview of 16 recommendations for strengthening the health system response to COVID-19 in the WHO European Region, breaking chains of transmission and diagnosing and treating cases while maintaining essential services. The document is supported by the [Action Points guide](#), which presents how the 16 action areas will need to change in frequency and focus as member states move across four transmission scenarios of the COVID-19 pandemic (no cases; sporadic cases; clusters of cases; community transmission).

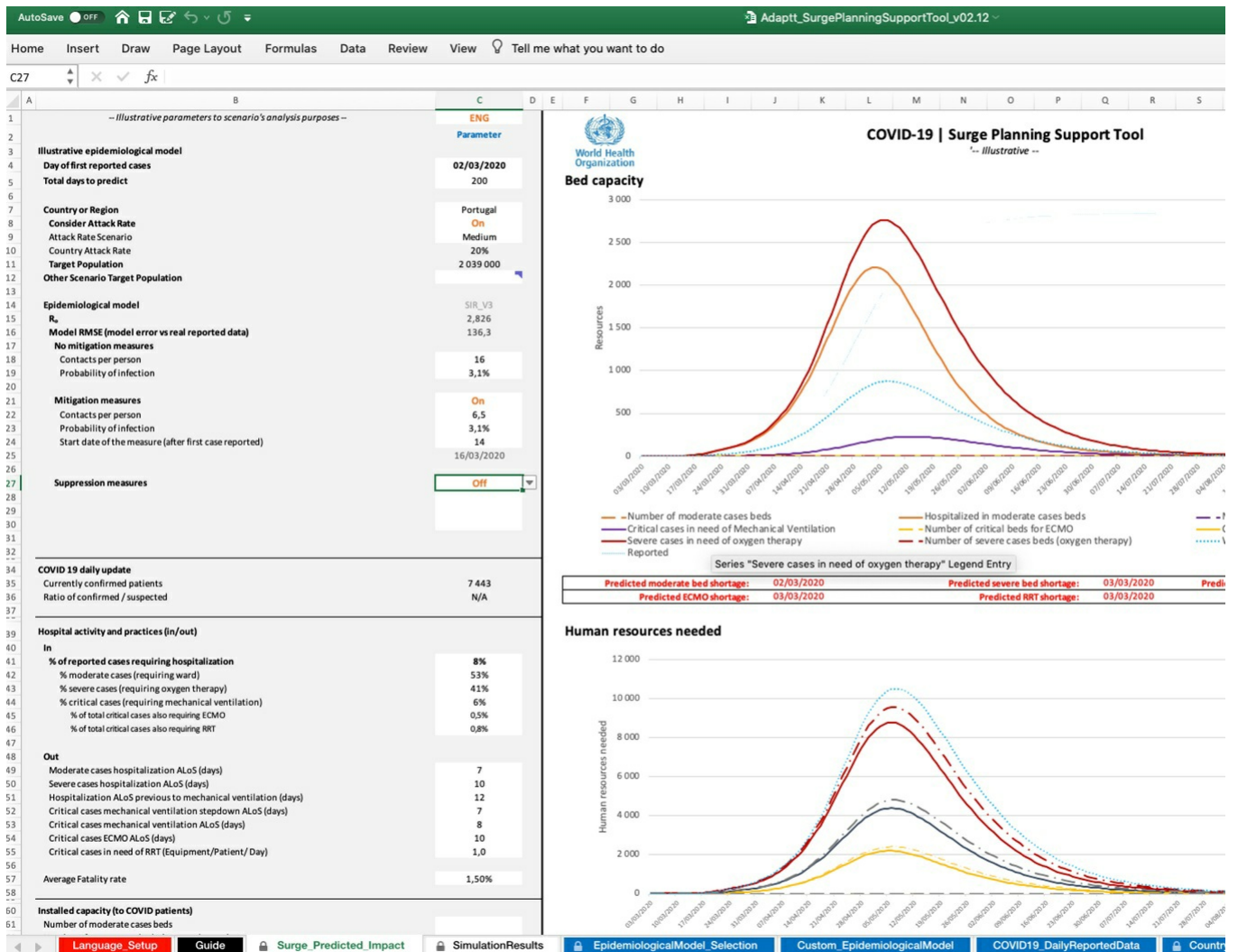
If you want to share your experience and perspective on COVID-19, [please do](#).

Surge Planning Tools

The WHO has developed a number of surge planning tools, which help to visualise acute and intensive care capacity needs over time, identify the timing and severity of the peak of the outbreak, and plan human resources for health systems.

The [Adaptt Surge Planning Support Tool](#) is an Excel-based graphical tool, which by simulating different parameters allows member states to focus on surge planning information, such as the number of beds required, the dates of predicted bed shortages and the detailed human resources needed. The users can input epidemiological data, vary mitigation scenarios and tailor the tool to account for attack rates. The tool supports the input of hospital activities and practices, hospital capacity, and human resources for health capacity.

[Here](#) you can download the tool itself as well as the user manual and the presentation of its functionality.



Adaptt is a spreadsheet and contains eight visible sheets:

- **Language Setup** (only available for editors for translation)
- **Guide**: the entrance tab where you have the index for the other tabs.
- **Surge_Predicted_Impact**: the main tab that shows the graphical output of the predictions and the predicted days of shortage in surge capacity. It allows the calibration of the illustrative epidemiological model and the resources parametrisation.
- **SimulationResults**: this tab allows the user to visualise the data used for the graphics presented on the **Surge_Predicted_Impact** tab.
- **EpidemiologicalModelSelection**: in this tab the preferred epidemiological model is selected.
- **Custom_EpidemiologicalModel**: this tab is for providing specific epidemiological model output data.
- **COVID19DailyReportedData**: in this tab users can update the real daily reported data considering the following parameters: date, confirmed, confirmed_new, and suspects.
- **CountryPopulation**: this tab has the population per country.

Adaptt was developed by the Associação Portuguesa de Administradores Hospitalares and Glintt and is an open source free software. For any clarification please email: adaptt@apah.pt

The **Health Workforce Estimator (HWFE)** is also an Excel-driven tool, which can be used to estimate the required number of each type of health worker based on the target number of mild, moderate, severe and critical patients per day. It also provides an analysis of the throughput of patients in multiple facilities and highlights workforce gaps for each type of health worker. [Here](#) you can download the tool itself and the presentation of its functionality.

The tool allows users to:

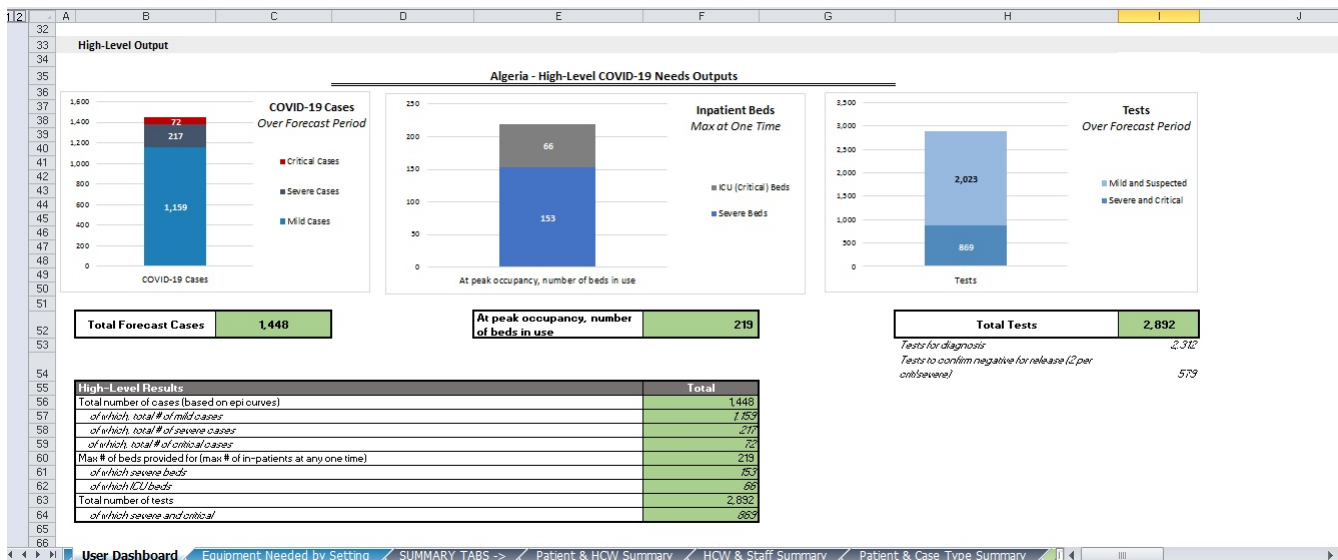
- Estimate the workforce needed to treat a specific number of COVID-19 cases per day (by level of severity).
- Understand the maximum capacity of existing workforce.
- See what workforce groups are limiting this capacity (undersupply).
- See what workforce groups could be shifted (oversupply).
- Understand the capability of a re-designed health workforce.

For further information please contact: scotterc@who.int

The **Essential Supplies Forecasting Tool (ESFT)** is another Excel-based tool for essential supplies management. It provides specific, focused outputs, including detailed quantifications of:

- equipment (personal protective equipment, diagnostics, biomedical equipment, drugs and consumables);
- inpatient beds (total, severe and critical); and
- tests (for mild, suspected, severe and critical cases).

The tool also provides some outputs on COVID-19 cases and health workforce requirements, including community health workers, in an aggregated format.



Part of the ESFT User Dashboard

The Adaptt, HWFE and ESFT tools all complement each other using the same base clinical attack rate ranges and ILO ISCO codes for health workforce classification. The outputs of the former two are, however, intentionally different due to their primary focus.

Technical Guidance

So far, the WHO has also developed three articles of Technical Guidance for the healthcare community and public health authorities to rely on.

Technical guidance #1 (1 April 2020): **Maintaining continuity of essential services and mobilising the health workforce** focuses on maintaining continuity of essential health care services across the continuum of care while managing the COVID-19 response, in particular, the recommendations 7-10 of the Policy Brief

Technical Guidance #2 (6 April 2020): **Creating surge capacity for acute and intensive care Recommendations for the WHO European Region**. This document organises guidance around the four components of surge capacity: space, staff, supplies and systems. It is aimed to assist hospital managers and other planners to ensure that there are:

- facilities to treat different patients, both COVID-19 and not;
- sufficient numbers of appropriately skilled and supervised health workers, while looking after their safety;
- an adequate supply of specific equipment, both for patient care and health worker safety;
- coordinated planning and decision-making to enable good surge capacity and response.

Technical guidance #3 (6 April 2020): **Supply of essential medicines and health technologies** should help those responsible for uninterrupted supply of medicines and health technologies during the COVID-19 outbreak. The document focuses on the prioritisation, legislation, registration and marketing authorisation, procurement, distribution and management of shortages.

Health System Response Monitor

This week the WHO has also launched the Health System Response Monitor ([HSRM](#)). It has been designed to collect and organise up-to-date information on how countries are responding to the crisis. As of 12 April, the monitor includes information for the following countries:

Belarus, Belgium, Bosnia and Herzegovina, Canada, Croatia, Cyprus, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, North Macedonia, Portugal, Russian Federation, Serbia, Spain, Sweden, Ukraine, United Kingdom.

The information on each country is grouped into six topics:

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- Preventing transmission: health communication, physical distancing, isolation and quarantine, monitoring and surveillance, testing
- Ensuring sufficient physical infrastructure and workforce capacity: physical infrastructure, workforce
- Providing health services effectively: planning services, managing cases, maintaining essential services
- Paying for services: health financing, entitlement and coverage
- Governance
- Measures in other sectors

There is also an [option](#), which allows comparison between different countries.

The WHO is constantly updating its resource base on strengthening the health system response. The latest updates are available [here](#).

Source: WHO Europe

Image credit: WHO Europe

If your company is interested in engaging with our [COVID-19 community](#), please send us an [email](#).

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